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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,343	10/21/2003	Jonathan B. Ballagh	X-1264 US	6650
24309	7590	09/17/2007		
XILINX, INC ATTN: LEGAL DEPARTMENT 2100 LOGIC DR SAN JOSE, CA 95124			EXAMINER DINH, PAUL	
			ART UNIT	PAPER NUMBER
			2825	
			MAIL DATE	DELIVERY MODE
			09/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/691,343

Applicant(s)

BALLAGH ET AL.

Examiner

Paul Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-34 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 28 is/are rejected.
- 7) ☒ Claim(s) 5-12, 29-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This FINAL office action is a response to the amendment filed on 8/20/06.

Claims 1-12, 27-31 and new claims 32-34 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of record Swoboda (US pub. 2001/0034598)

(Claims 1 and similarly recited claim 27)

Selecting a link represented by at least a portion of a design to be simulated (*field of invention*) within a high level modeling system (*high level is a relative term, this prior art considered a high level modeling system*); determining a directionality for the link selected (fig 5); and

In response to determining the link to be bidirectional, emulating the link in the design (emulator 12 in fig 5) using first and second unidirectional links within the high level modeling system

(See fig 5 and corresponding text, i.e., par 0094 “the emulator TDI-to-chip TDO connection is used as a bi-directional signal on which the TMS signal from the emulator, the TDO signal from the emulator and the TDI signal from the target chip; TDI, TDO = first and second unidirectional links, high level is a relative term, this prior art considered a high level modeling system)

(Claims 2-4) in which the emulating represents the second unidirectional link in opposite data-routing orientation relative to the first unidirectional link (fig 5); simulating signal excitation on at least a portion of the design, the portion to model a circuit; and determining results from the simulating signal excitation (pars 4, 7, 9, 39); in which the simulating and determining results are performed using the emulated first and second unidirectional links (fig 2, 4-5).

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(Claim 28) simulating signal excitation of at least a portion of the system model modified with the two separate unidirectional links (pars 2, 4, 7, 9, 39); and recording responses from the simulating (pars 2, 4, 7, 9, 39)

2. Claims 1-4, 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of record Sample (US pub. 2002/0107682)

(Claims 1 and similarly recited claim 27)

Selecting a link represented by at least a portion of a design to be simulated (*pars 2-4*) within a high level modeling system (*high level is a relative term, this prior art considered a high level modeling system*); determining a directionality for the link selected (fig 5); and

In response to determining the link to be bidirectional, emulating the link in the design using first and second unidirectional links within the high level modeling system

(*Par 0047 "line 72 is bidirectional and will be signals in one direction or another direction depending on the particular design being emulated"; "one direction or another direction" = first and second unidirectional links, high level is a relative term, this prior art considered a high level modeling system*)

(Claims 2-4) in which the emulating represents the second unidirectional link in opposite data-routing orientation relative to the first unidirectional link (*par 0047: signals in one direction or another direction depending on the particular design being emulated*); simulating signal excitation on at least a portion of the design, the portion to model a circuit; and determining results from the simulating signal excitation (pars 0002-0004); in which the simulating and determining results are performed using the emulated first and second unidirectional links (pars 0002-0004).

(Claim 28) simulating signal excitation of at least a portion of the system model modified with the two separate unidirectional links (i.e., "*signals in one direction or another direction depending on the particular design being emulated*"); and recording responses from the simulating (pars 0002-0004).

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Allowable Subject Matter

Claims 5-12, 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 32-34 are allowed.

Claims 5-12, 29-31 would be allowable and claims 32-34 are allowed because the prior art of record does not teach or suggest the limitations in claim 5, claim 29, and claim 32.

Correspondence Information

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Dinh whose telephone number is 571-272-1890. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jack Chiang can be reached on 571-272-7483. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Dinh
Primary Examiner

A handwritten signature in black ink that reads "Paul Dinh". The signature is written in a cursive style with a long, sweeping underline that extends to the right.